# Oracle® Switch ES1-24 Release 1.3.1

Product Notes

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# Using This Documentation

This document contains late-breaking information about this release of Oracle's Switch ES1-24. This document is written for technicians, system administrators, authorized service providers, and users who have advanced experience troubleshooting and replacing hardware.


- "Related Documentation" on page v
- "Feedback" on page vi
- "Access to Oracle Support" on page vi


# Related Documentation

| Documentation | Links |
|---|---|
| All Oracle products | http://www.oracle.com/documentation |
| Oracle Switch ES1-24 documentation set | http://docs.oracle.com/cd/E39109_01/index.html |
| Sun Network 10GbE Switch 72p documentation set | http://docs.oracle.com/cd/E19934-01/index.html |
| Sun Blade 6000 Ethernet Switched NEM 24p 10GbE documentation set | http://docs.oracle.com/cd/E19285-01/index.html |

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# Oracle Switch ES1-24 Release 1.3.1 Product Notes

Review the latest information and upgrade the switch firmware to the latest version.


- "Switch Documentation Reading Order" on page 1
- "Introducing What's New in Release 1.3" on page 2
- "Updates to 1.3 Release From Patch Update 1.3.1.7" on page 4
- "Upgrading the Oracle Switch ES1-24 Firmware" on page 4
- "Configure 1 Gbps Mode on SFP+ Interfaces" on page 9
- "Configure Advertised Speed on the 10GBASE-T Interfaces" on page 10
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- "Configuring In-Band Management" on page 15
- "Managing SEFOS Configurations" on page 17
- "Configuring TACACS+" on page 19
- "Issues Corrected in the 1.3.1.7 Patch Update" on page 21
- "Issues Corrected in Prior Updates" on page 22
- "Known Issues" on page 23


## Switch Documentation Reading Order

All of the switch product documentation and related documentation can be found at: `http://docs.oracle.com/cd/E39109_01/index.html`

Read the documentation in this order.

| Step | Document Title or Type | Information Provided |
|---|---|---|
| 1. | *Oracle Switch ES1-24 Release 1.3.1 Product Notes* | Late-breaking information, supported configurations, and system limitations. |
| 2. | *Oracle Switch ES1-24 Installation Guide* | Installation instructions. |
| 3. | *Oracle Switch ES1-24 Configuration Guide* | Software configuration instructions. |
| 4. | *Oracle Switch ES1-24 Service Manual* | Removal and installation of replaceable parts. |
| 5. | Administration Guides | Reference and administration information for the software. |
| 6. | *Sun Ethernet Fabric Operating System CLI Base Reference Manual CLI Base Reference Manual* | Base command descriptions, examples, and reference information. |
| 7. | *Sun Ethernet Fabric Operating System CLI Enterprise Reference Manual CLI Base Reference Manual* | Enterprise command descriptions, examples, and reference information. |

# Introducing What's New in Release 1.3

These new features are supported for this release:


- "Logical Link Aggregation" on page 2
- "Edge Virtual Bridging" on page 3
- "IEEE DCBX" on page 3
- "In-Band Management" on page 3
- "Reflective Relay" on page 3
- "Port Mirroring" on page 4


## Logical Link Aggregation

Logical Link Aggregation (LLA) is a layer 2 feature providing the aggregation of links from a server connected to two physical switches resulting in increased redundancy and capacity. LLA is only supported when the switch is running a Layer 2 configuration. LLA is not supported in Layer 3 configurations.

Refer to the *Sun Ethernet Fabric Operating System LLA Administration Guide* for more information.

# Edge Virtual Bridging

Edge Virtual Bridging enables the coordination of configuration and management of a virtualized networking environment between an end station running Oracle Solaris and the external SEFOS bridge.

Refer to the *Sun Ethernet Fabric Operating System EVB Administration Guide* for more information.

# IEEE DCBX

Data center bridging (DCB) Ethernet enhancements are available to improve Ethernet networking and management in data center environments. DCB is a framework that defines the enhancements that are required for switches and endpoints. DCB includes the following features:

- PG, also known as ETS, which is a priority grouping specification that provides bandwidth management as well as a scheduling algorithm for various traffic classes on a converged link.
- PFC, which is an enhancement to the existing Ethernet-pause protocol, that enables 0-drop packet delivery for certain traffic classes.

This release of the SEFOS DCB feature supports DCB version 1.0.1 and IEEE DCBX as specified by the DCB task group.

Refer to the *Sun Ethernet Fabric Operating System IEEE DCBX Administration Guide* for more information.

# In-Band Management

In-band configuration mode on the switch enables access to the switch's Oracle ILOM interface from one of the 24 10 GbE in-band ports.

See "Configuring In-Band Management" on page 15.

# Reflective Relay

Reflective relay enables the packet from a device to be returned back from the same downstream port that delivered the packets. The most common use case is when the same interface is used to transmit and receive packets. This usage can be seen while using Virtual Ethernet Packet Aggregation (VEPA).

Refer to the *Sun Ethernet Fabric Operating System CLI Base Reference Manual* for more information.

## Port Mirroring

Port mirroring enables forwarding a copy of a packet received on one interface (source) to another interface (destination) on the same switch.

Refer to the *Sun Ethernet Fabric Operating System Port Mirroring Administration Guide* for more information.

# Updates to 1.3 Release From Patch Update 1.3.1.7

- Upink Port Trailing Feature monitors the state of the uplink port and manages the downlink ports according to the state of the uplink port. When the uplink goes down, the downlink port(s) will be shut down, providing the HA feature the feedback it needs to switch over to alternate link or path. For more details, refer to the *Uplink Trailing Administration Guide*.
- VRRPv3 (VRRP version 3) extends capability to IPv6 in addition to IPv4. Version 3 supports sub-second operation. It also supports accept-mode configuration. For more details, refer to the *VRRPv3 Administration Guide*.
- Change Request (CR) fixes. See "Issues Corrected in the 1.3.1.7 Patch Update" on page 21.

# Upgrading the Oracle Switch ES1-24 Firmware

The `Oracle_Switch_ES1-24_sefos-1_3_1_7.pkg` restores the switching software and required components to version 1.3.1.7.

- "Back Up the Current Configuration Before Upgrading" on page 5
- "Download the Switch Firmware Package" on page 6
- "Upgrade the Switch Firmware" on page 7

# ▼ Back Up the Current Configuration Before Upgrading

Save the current configuration to a remote site before upgrading the software. Refer to the *Oracle Switch ES1-24 Configuration Guide* for additional information.

You can also use the backup and restore feature from Oracle ILOM to save the current Oracle ILOM and SEFOS configurations to a remote server. You can then restore the switch configuration after upgrading the firmware. See "Include the SEFOS Configuration in Backups" on page 17.

---

**Note –** During the upgrade, if you answer `yes` to the question `Preserve existing configuration (y/n)?`, the Oracle ILOM and SEFOS configurations are automatically preserved. There is no need to explicitly restore the configuration.

---

1. **Configure the default IP address.**

   a. **Enter Global Configuration mode.**

```
SEFOS# configure terminal
```

   b. **Configure the default IP address and subnet mask as `10.0.0.100` and `255.255.0.0`.**

```
SEFOS(config)# default ip address 10.0.0.100 subnet-mask 255.255.0.0
```

   c. **Exit Global Configuration mode.**

```
SEFOS(config)# end
```

2. **Configure the restoration file name.**

   a. **Enter Global Configuration mode.**

```
SEFOS# configure terminal
```

   b. **Configure a configuration restoration file name.**

```
SEFOS(config)# default restore-file myconfig.conf
```

c. **Exit Global Configuration mode.**

```
SEFOS(config)# end
```

3. **Save the current configuration for restoration.**

```
SEFOS(config)# write startup-config
```

4. **Copy the configuration file to a remote location.**

```
SEFOS(config)# copy startup-config tftp://12.0.0.100/switch.conf
```

5. **Exit and restart the switch.**

```
SEFOS# exit
-> reset /SP
Are you sure you want to reset /SP (y/n)? y
Performing reset on /SP
```

6. **Log in and save the current configuration again before starting the upgrade.**

```
SEFOS# write startup-config
SEFOS# copy startup-config tftp://12.0.0.100/switch.conf
```

7. **Download the switch firmware package.**

See "Download the Switch Firmware Package" on page 6.

# ▼ Download the Switch Firmware Package

After backing up your current configuration, download the switch firmware upgrade package `Oracle_Switch_ES1-24_sefos-1_3_1_7.pkg`.

1. **Log in to My Oracle Support at:**

   `http://support.oracle.com`

2. **Select the Patches & Updates tab.**
3. **Under the Patch Search section, select Product or Family (Advanced Search).**
4. **Type `switch` in the Product field and select Oracle Switch ES1-24.**
5. **Select the down arrow in the Release field and select the Oracle Switch ES1-24 folder.**

6. **Select the 1.3 release.**
7. **Click the Search button.**
8. **Click the number in the Patch Name column.**
9. **Click Download.**
10. **Click the filename of the .zip file to begin the download.**
11. **Save the file to an appropriate location.**
12. **Upgrade the firmware.**

    See "Upgrade the Switch Firmware" on page 7.

## ▼ Upgrade the Switch Firmware

---

**Note –** You must be logged in as `root` to perform the upgrade.

---

---

**Note –** Before upgrading the switch firmware, back up the current configuration as described in "Back Up the Current Configuration Before Upgrading" on page 5.

---

1. **Ensure that you have a network configuration in place on the switch.**

   For more information, refer to the *Oracle Switch ES1-24 Installation Guide*.
2. **Use TFTP, FTP, or the Oracle ILOM web interface to copy the firmware image to your server.**

   The firmware image file is `Oracle_Switch_ES1-24_sefos-1_3_1_7.pkg`.
3. **Answer the questions that appear on the screen as you proceed through the installation.**

   The following example illustrates the upgrade process using FTP from a server with an IP address of `192.168.1.100`.

```
-> cd /SP/firmware/
/SP/firmware

-> load -source
ftp://username:password@192.168.1.100/Oracle_Switch_ES1-24_sefos-
1_3_1_7.pkg

Downloading firmware image. This will take several minutes.
.
```

```
NOTE: An upgrade takes several minutes to complete. ILOM
      will enter a special mode to load new firmware. No
      other tasks can be performed in ILOM until the
      firmware upgrade is complete and ILOM is reset.

Are you sure you want to load the specified file (y/n)? y
Preserve existing configuration (y/n)? y
Starting FW upgrade. This will take approximately 3 minutes.

Checking "root file system image"

Starting Root File System upgrade
Upgrading Root File System image to partition 1
............................................................
............................................................
............................................................
............................................................
Checking "compressed kernel image"

Starting kernel upgrade

Upgrading image to partition 1
....
Syncing configuration files
................................
Checking "FPGA image"

Starting FPGA upgrade. This process may take up to 3 minutes.
Programming FPGA image
FPGA upgrade requires SEFOS to be stopped. Please wait while
FPGA is being programmed.
Skip upgrading FPGA (same version).
.
Checking "U-Boot image"
Starting U-Boot upgrade
Skip upgrading U-Boot (same version).

Firmware update is complete.
The system must be reset for the new image to be loaded

-> reset /SP
Are you sure you want to reset /SP (y/n)? y
Performing reset on /SP
```

**Note –** If the hostname was not set prior to upgrade, the switch displays `SUNSP-unknown` in the login prompt. You must reset the switch a second time to clear this condition.

**4. When the switch reboots after the upgrade, verify the software version.**

```
-> version
SP firmware 3.0.16.0
SP firmware build number: 91963
SP firmware build date: Wed Oct 22 08:32:49 PDT 2014
SP firmware install date: Wed Oct 22 19:14:52 UTC 2014
SP filesystem version: 1.3.1.7

-> cd /SYS/fs_cli/
cd: Connecting to Fabric Switch CLI

SEFOS# show system information

Hardware Version                  : 2.5.8_00209384
Firmware Version                  : ES1-24-1.3.1.7
Switch Name                       : Oracle ES1-24
System Contact                    :
System Location                   :
Logging Option                    : Console Logging
Login Authentication Mode         : Local
Config Save Status                : Not Initiated
Remote Save Status                : Not Initiated
Config Restore Status             : Not Initiated
```

# ▼ Configure 1 Gbps Mode on SFP+ Interfaces

The four SFP+ ports, 21 to 24, are dual-speed capable ports and can provide 1 Gbps connectivity when used with the supported transceivers and configured for 1 Gbps operation from the SEFOS CLI.

- To configure a 1 Gbps fiber link, use the supported 10 Gbps/1 Gbps SFP+ transceiver (PN x2129a). The speed must be changed to 1 Gbps on the appropriate port (see the following example).

- To configure a 1 Gbps copper link, use the supported SFP transceiver (PN x2123a), which provides a RJ45 interface. This is a 1 Gbps-only transceiver and the speed must be changed to 1 Gbps on the appropriate port (see the following example).

**Caution –** When using 1 Gbps mode, autonegotiation **must be** disabled on the link-partner. The link-partner must be configured in 1 Gbps-Forced-FDX mode.

1. **Obtain the SEFOS prompt.**
2. **Configure the speed to 1 Gbps.**

   For example, to configure ports 21 and 22:

```
SEFOS# config terminal
SEFOS(config)# interface range extreme-ethernet 0/21-22
SEFOS(config-if)# shutdown
SEFOS(config-if)# speed 1000
SEFOS(config-if)# no shutdown
SEFOS(config-if)# end
SEFOS# write startup-config
```

# ▼ Configure Advertised Speed on the 10GBASE-T Interfaces

The 20 10GBASE-T ports, 1 to 20 are triple-speed capable ports and can provide 10 Gbps, 1 Gbps, and 100 Mbps connectivity. The 10GBASE-T ports operate in autonegotiation mode only, and support all three speeds by default. For most deployments, the default setting would be optimal, permitting link-partners with any speed to link up. If required, the maximum advertised speed can be changed from the SEFOS CLI.

1. **Obtain the SEFOS prompt.**
2. **Configure the maximum advertised speed to 1 Gbps.**

   For example, to configure ports 11 and 12.

```
SEFOS#
SEFOS(config)# interface range extreme-ethernet 0/11-12
SEFOS(config-if)# shutdown
SEFOS(config-if)# speed 1000
```

```
SEFOS(config-if)# no shutdown
SEFOS(config-if)# end
SEFOS# write startup-config
```

**Note –** The ports only advertise 1 Gbps and 100 Mbps speeds.

**3. Configure the maximum advertised speed to 100 Mbps.**

For example, to configure ports 1 and 4.

```
SEFOS# config terminal
SEFOS(config)# interface extreme-ethernet 0/1
SEFOS(config-if)# shutdown
SEFOS(config-if)# speed 100
SEFOS(config-if)# no shutdown
SEFOS(config-if)# exit
SEFOS(config)# interface extreme-ethernet 0/4
SEFOS(config-if)# shutdown
SEFOS(config-if)# speed 100
SEFOS(config-if)# no shutdown
SEFOS(config-if)# end
SEFOS# write startup-config
```

**Note –** The ports only advertise 100 Mbps and can only link up with a link-partner at 100 Mbps (if supported by the link-partner).

# ▼ Fine Tune the VLAN Setup

The switch provides flexibility in managing ingress VLAN traffic. For example, you can enable port ingress filtering and can also specify the acceptable frame type to implement fine-grained control on the ingress traffic. Refer to the *Sun Ethernet Fabric Operating System CLI Base Reference Manual* for details.

**1. Obtain the SEFOS prompt.**

**2. Display the default port configuration.**

```
SEFOS# show vlan port config port extreme-ethernet 0/3

Vlan Port configuration table
```

```
------------------------------
Port Ex0/3
Port Vlan ID                        : 1
Port Acceptable Frame Type          : Admit All
Port Ingress Filtering              : Disabled
Port Mode                           : Hybrid
Port Gvrp Status                    : Enabled
Port Gmrp Status                    : Enabled
Port Gvrp Failed Registrations      : 0
Gvrp last pdu origin                : 00:00:00:00:00:00
Port Restricted Vlan Registration   : Disabled
Port Restricted Group Registration  : Disabled
Mac Based Support                   : Disabled
Subnet Based Support                : Disabled
Port-and-Protocol Based Support     : Enabled
Default Priority                    : 0
Filtering Utility Criteria          : Default
Port Protected Status               : Disabled
------------------------------------------------------
```

3. **Reconfigure the port.**

   For example, to reconfigure the 10 GbE port `Ex0/3` as a tagged port in `vlan 3` and permitting only tagged frames:

```
SEFOS# config terminal
SEFOS(config)# vlan 3
SEFOS(config-vlan)# port extreme-ethernet 0/3
SEFOS(config-vlan)# exit
SEFOS(config)# interface extreme-ethernet 0/3
SEFOS(config-if)# switchport ingress-filter
SEFOS(config-if)# switchport acceptable-frame-type tagged
SEFOS(config-if)# end
SEFOS# show vlan port config port extreme-ethernet 0/3

Vlan Port configuration table
------------------------------
Port Ex0/3
Port Vlan ID                        : 1
Port Acceptable Frame Type          : Admit Only Vlan Tagged
Port Ingress Filtering              : Enabled
Port Mode                           : Hybrid
Port Gvrp Status                    : Enabled
Port Gmrp Status                    : Enabled
Port Gvrp Failed Registrations      : 0
Gvrp last pdu origin                : 00:00:00:00:00:00
Port Restricted Vlan Registration   : Disabled
Port Restricted Group Registration  : Disabled
Mac Based Support                   : Disabled
```

```
Subnet Based Support                 : Disabled
Port-and-Protocol Based Support      : Enabled
Default Priority                     : 0
Filtering Utility Criteria           : Default
Port Protected Status                : Disabled
```

4. **Add an untagged port.**
   - To use the preferred method, go to Step 5.
   - To use the alternate method, go to Step 6.
5. **Add an untagged port using the preferred method.**
   a. **Type these commands.**

      For example, add 10 GbE port `Ex0/3` to `vlan 3` as untagged.

```
SEFOS# configure terminal
SEFOS(config)# interface extreme-ethernet 0/3
SEFOS(config-if)# switchport access vlan 3
SEFOS(config-if)# end
```

   b. **Verify the port VLAN ID.**

```
SEFOS# show vlan port config port extreme-ethernet 0/3

Vlan Port configuration table
-------------------------------
Port Ex0/3
 Port Vlan ID                        : 3
 Port Acceptable Frame Type          : Admit All
 Port Ingress Filtering              : Enabled
 Port Mode                           : Hybrid
 Port Gvrp Status                    : Disabled
 Port Gmrp Status                    : Disabled
 Port Gvrp Failed Registrations      : 0
 Gvrp last pdu origin                : 00:00:00:00:00:00
 Port Restricted Vlan Registration   : Disabled
 Port Restricted Group Registration  : Disabled
 Mac Based Support                   : Disabled
 Subnet Based Support                : Disabled
 Port-and-Protocol Based Support     : Enabled
 Default Priority                    : 0
 Dot1x Protocol Tunnel Status        : Peer
 LACP Protocol Tunnel Status         : Peer
 Spanning Tree Tunnel Status         : Peer
 GVRP Protocol Tunnel Status         : Peer
```

```
 GMRP Protocol Tunnel Status          : Peer
 IGMP Protocol Tunnel Status          : Peer
 Filtering Utility Criteria           : Default
 Port Protected Status                : Disabled
```

**6. Add an untagged port using the alternate method.**

**a. Type these commands.**

For example, add 10 GbE port `Ex0/4` to `vlan 4` as untagged.

```
SEFOS# configure terminal
SEFOS(config)# vlan 4
SEFOS(config-vlan)# ports extreme-ethernet 0/4 untagged
extreme-ethernet 0/4
SEFOS(config-vlan)# exit
SEFOS(config)# interface extreme-ethernet 0/4
SEFOS(config-if)# switchport pvid 4
SEFOS(config-if)# end
```

**b. Verify the port VLAN ID.**

```
SEFOS# show vlan port config port extreme-ethernet 0/4

Vlan Port configuration table
-----------------------------
Port Ex0/4
 Port Vlan ID                         : 4
 Port Acceptable Frame Type           : Admit All
 Port Ingress Filtering               : Enabled
 Port Mode                            : Hybrid
 Port Gvrp Status                     : Disabled
 Port Gmrp Status                     : Disabled
 Port Gvrp Failed Registrations       : 0
 Gvrp last pdu origin                 : 00:00:00:00:00:00
 Port Restricted Vlan Registration    : Disabled
 Port Restricted Group Registration   : Disabled
 Mac Based Support                    : Disabled
 Subnet Based Support                 : Disabled
 Port-and-Protocol Based Support      : Enabled
 Default Priority                     : 0
 Dot1x Protocol Tunnel Status         : Peer
 LACP Protocol Tunnel Status          : Peer
 Spanning Tree Tunnel Status          : Peer
 GVRP Protocol Tunnel Status          : Peer
 GMRP Protocol Tunnel Status          : Peer
```

```
IGMP Protocol Tunnel Status          : Peer
Filtering Utility Criteria           : Default
Port Protected Status                : Disabled
```

# Configuring In-Band Management

Typically, you can access the Oracle ILOM interface within the switch through the NET MGT port. By configuring in-band management, the Oracle ILOM interface becomes accessible through one of the 24 10 GbE ports. The NET MGT port remains active, and simultaneous access to Oracle ILOM is possible.


- "Requirements for Configuring In-Band Management" on page 15
- "Configure In-Band Management for the Switch" on page 16


## Requirements for Configuring In-Band Management

These requirements must be met to configure in-band management:

- In-band and NET MGT networks must be in different subnets.
- Configure DHCP on only one of the interfaces. Otherwise, the switch receives two default routes.
- Configure one IP gateway only. You can configure the IP gateway using either network management or in-band settings. The IP gateway setting of the other gateway must be set to `0.0.0.0`.

---

**Note –** If the IP gateway is changed to another subnet, the current `ssh` session stops responding.

---

- On the in-band network, ports used to connect to the switch must be in the default VLAN. No other configuration is required in SEFOS.

---

**Note –** If SEFOS has an IP address on a L3 VLAN interface in the same subnet, you might see ICMP error messages.

---

# ▼ Configure In-Band Management for the Switch

**Caution –** Configure the in-band settings from the serial console to avoid losing access to the switch in case of a misconfiguration.

**1. Telnet to the serial console of the switch.**

```
ORACLESP-SPNAME login: root
Password: password
Last login: Wed Oct  3 01:46:55 from hostname.us.oracle.com

Oracle(R) Integrated Lights Out Manager (Fabric Component Edition)

Version 3.0.16.0 r78530

Copyright (c) 2013, Oracle and/or its affiliates. All rights reserved.

Warning: The system appears to be in manufacturing test mode.
Contact Service immediately.

Warning: password is set to factory default.
```

**2. Configure the in-band management settings.**

```
-> cd /SP/inband_network/
/SP/inband_network
-> set pendingipaddress=xx.xxx.xxx.xx
Set 'pendingipaddress' to 'xx.xxx.xxx.xx'
-> set pendingipgateway=xx.xxx.xxx.x
Set 'pendingipgateway' to 'xx.xxx.xxx.x'
-> set commitpending=true
Set 'commitpending' to 'true'
-> set state=enabled
Set 'state' to 'enabled'
-> ls
 /SP/inband_network
    Targets:
        test

    Properties:
        commitpending = (Cannot show property)
        dhcp_server_ip = none
        ipaddress = xx.xxx.xxx.xx
        ipgateway = xx.xxx.xxx.x
        ipnetmask = 255.255.255.0
```

```
        macaddress = 00:xx:xx:xx:xx:xx
        pendingipaddress = xx.xxx.xxx.xx
        pendingipdiscovery = static
        pendingipgateway = xx.xxx.xxx.x
        pendingipnetmask = 255.255.255.0
        state = enabled
...
->
```

**3. (Optional) Disable the out-of-band network if needed.**

```
-> cd /SP/network
/SP/network

-> set state=disabled
Set 'state' to 'disabled'
```

# Managing SEFOS Configurations

These tasks assist in managing SEFOS configurations:

- "Include the SEFOS Configuration in Backups" on page 17
- "Restore the Configuration" on page 18

## ▼ Include the SEFOS Configuration in Backups

By default, only the Oracle ILOM configuration is backed up when the backup feature is used. Complete the following tasks to include the SEFOS configuration in this backup.

**1. Before backing up your SEFOS configuration using the Oracle ILOM backup feature, complete the following steps.**

**a. Save the switch configuration.**

```
SEFOS# write startup-config
Building configuration ...
[OK]
```

**b. Set a passphrase.**

```
-> cd /SP/config
/SP/config
-> set passphrase=abc123
Set 'passphrase' to 'abc123'
```

---

**Note –** The passphrase you provide must not contain the @, ' (apostrophe), " (quotes), or \ (back slash) symbols.

---

2. **Ensure that you have proper login credentials for the server where the configuration is to be backed up.**

3. **Back up the configuration to a remote server.**

```
-> set dump_uri=ftp://username:password@192.168.1.100/tmp/mySwitchConfig.bak
Dump successful
```

## ▼ Restore the Configuration

---

**Note –** The administrator must always reset the SNMP engine ID prior to doing the backup or restore operation. Because of CR 6934622, the SNMP engine ID (even when previously set) is not visible after a reset of the system, and the administrator must record and set the ID explicitly.

---

1. **Configure the network settings on the Oracle ILOM network management interface to communicate with the backup server.**

```
-> cd /SP/network
```

2. **Set the passphrase to the same value that was used for backup.**

   See "Include the SEFOS Configuration in Backups" on page 17.

```
-> cd /SP/config
/SP/config
-> set passphrase=abc123
Set 'passphrase' to 'abc123'
```

3. **Restore the configuration from the server.**

```
-> set load_uri=ftp://username:password@192.168.1.100/tmp/mySwitchConfig.bak
Load successful.
```

**Note –** If DHCP is used for network configuration, the DNS setting is overwritten with values supplied by the DHCP server upon restoration.

# Configuring TACACS+

These topics describe how to configure TACACS+:


- "TACACS+ Properties" on page 19
- "Configure TACACS+ Settings" on page 20


## TACACS+ Properties

| CLI Property | Default Value | Description |
|---|---|---|
| `address` [*tacacs+_server_IP_address*] | `0.0.0.0` | Specifies the IP address or DNS name of the TACACS+ server. If you use DNS, ensure that DNS is configured and functional. |
| `Defaultrole` [`a`\|`u`\|`o`\|`c`\|`r`\|`s`\|`Administrator`\|`Operator`] | `Operator` | Specifies the access role that is granted to all authenticated TACACS+ users.<br>This property supports the following legacy roles:<br>• `Administrator`<br>• `Operator`<br>• Any individual role ID combinations where `a` = Admin, `u` = User Management, `o` = Operator, `c` = Console, `r` = Reset and Host Control, and `s` = Service. |
| `fs_privilege` [1\|15] | `1` | Specifies the `fs_privilege` that enables TACACS+ authenticated users to access and control SEFOS. |
| `port` [*port_number*] | `49` | Specifies the port number used to communicate with the TACACS+ server. |
| `protocol`<br>`service` | `ip`<br>`ppp` | `protocol` identifies the TACACS+ protocol type. `service` identifies the TACACS+ service type.* |

| CLI Property | Default Value | Description |
|---|---|---|
| `secret [`*tacacs+_secret*`]` | [none] | Specifies the shared secret that is used to protect sensitive data and to ensure that the client and server recognize each other. |
| `state [enabled\|disabled]` | `Disabled` | Specifies whether the TACACS+ client is enabled or disabled. |

* In the TACACS+ server, the combination of `ppp` and `ip` can be configured to send additional fields in packet data. For Oracle ILOM clients, this configuration is used to send Oracle ILOM-specific fields like `sefos-fs-privilege` and `ilom-role`.

## ▼ Configure TACACS+ Settings

**Note –** Before you configure TACACS+ settings for use with SEFOS, ensure that the User Management (`u`) role is enabled. Also ensure that you have collected all relevant information about your TACACS+ environment, then configure the appropriate settings from Oracle ILOM to enable authentication using TACACS+.

1. **Log in to the Oracle ILOM CLI.**
2. **Navigate to the** `tacacs+` **directory.**

```
-> cd /SP/clients/tacacs+
```

3. **Use the** `set` **command to configure the TACACS+ properties.**

```
-> set/SP/clients/tacacs+ state=enabled address=10.12.235.32
Set 'state' to 'enabled'
Set 'address' to '10.12.235.32'
```

4. **Use the** `show` **command to view the TACACS+ properties.**

```
-> show /SP/clients/tacacs+
/SP/clients/tacacs+
Targets:

Properties:
   address = 10.12.235.32
   defaultrole = o
   fs_privilege = 1
   port = 49
   protocol = ip
   secret = *****
```

```
    service = ppp
    state = enabled

Commands:
    cd
    set
    show
```

# Issues Corrected in the 1.3.1.7 Patch Update

These issues have been corrected in this update.

| Issue number | Description of Corrected Issue |
|---|---|
| 19888402 | setting up snmp alertmgt rules gives error |
| 19882990 | Need IPv6 support in VRRP |
| 19882963 | Please provide link-trailing feature |
| 19689350 | Apply fixes for BASH software threat: CVE-2014-7169 / CVE-2014-6271 |
| 18976891 | (Sev. 2) CVE-2014-0224 ETC, MULTIPLE SECURITY BUGS - UPGRADE OPENSSL |
| 19367263 | route-map command cannot be removed from "router ospf" configuration |
| 19285638 | TACACS+ user with fs_privilege 15 does not have enough SEFOS privileges |
| 19231488 | tacacs+ username incorrect |
| 19231031 | TACACS+ user logged in but autentication shows local |
| 18794861 | Re-configure IP address after a "no ip address", previous config re-appears |
| 18756128 | Missing "#" in CLI Prompt |
| 18652705 | Copying in (load_uri) sefos files using scp does not prompt for password. |
| 18521966 | Switch hangs on erase startup config |
| 18225539 | Show debugging command always shows output "OSPF3 - Critical debugging is on" |

# Issues Corrected in Prior Updates

These issues were corrected in prior product updates.

| Issue number | Description of Corrected Issue |
|---|---|
| 18506174 | In PVRST mode, SNMP traps are sent even when the STP role remains the same. |
| 18506152 | RIP: Triggered updates are sent from a passive interface. |
| 18225754 | Provide CLI to prune VLANs in trunk mode. |
| 18225688 | Provide CLI to clear dynamic mac addresses globally, per-VLAN, or per-interface. |
| 18225626 | Unclean shutdown of diagnostics does not release buffers or lock, and can block Rx or Tx. |
| 18225549 | VLAN name cannot be specified for a new VLAN in PVRST mode. |
| 18225539 | `show debugging` command always shows output `201cOSPF3 - Critical debugging is on 201d`. |
| 18225527 | IPV6: ND or RA packets are only trapped to the CPU and are not switched to other ports. |
| 18225523 | Dynamic IPv6 route entries show up in `show running` command output |
| 18225516 | When applying ACL to block RA from source server, ACL blocks all ICMP. |
| 18225511 | `debug npapi` command: Added Rx and Tx packet dump options. |
| 18225492 | Copy SEFOS files from Oracle ILOM. |
| 18225482 | Display hostname in the Oracle ILOM prompt. |
| 18225476 | Display CPU, memory, and disk usage from the Oracle ILOM CLI. |
| 18225459 | Support for multiple TACACS+ servers. |
| 18225449 | Support for multiple RADIUS servers. |
| 17497249 | Implement reset for `/SYS/sefos`. |
| 17442491 | Remotely authenticated user is removed from SEFOS prematurely. |
| 17442507 | Sessions state not cleaned up in SEFOS when remotely authenticated sessions exits. |
| 17442517 | Dynamic MAC entries of the port do not get flushed on STP status change. |

| Issue number | Description of Corrected Issue |
|---|---|
| 17442544 | The `show ether summary` command might not correctly reflect the Port-channel state. |
| 16710117 | Command fails to create IP filter if the traffic direction is mixed. |
| 16718537 | While creating 512 IP ACL filters for each port, the CLI starts failing randomly. |
| 16808681 | SLB L3: `redirectslb` option takes a while to appear in `show run int` command output. |
| 16244830 | `linkDown` trap sent when network `OperStatus` is already `DOWN`. |
| 16270531 | `ifNumber` value does not reflect the current number of interfaces in `ifTable`. |
| 16673144 | SEFOS `fsRstHwFailureTrap` sent with erroneous content when port state changes. |
| 16808593 | SLB L3V6: Assigning `redirectslb` and `shut/no shut vlan int` causes SEFOS to hang. |
| 16809178 | SLB L3: Deleting `slb` group leaves `redirectslb` ACL filter unattached. |
| 16972195 | LLA: `ping` is intermittent with RSTP and PVRST. |

# Known Issues

These are known issues at the time of this release.


- "Switch Might Get Stuck at uboot on SSD Related Error (16922931)" on page 24
- "Loss of Access to Management Node Oracle ILOM When Starting or Resetting the System (16893765)" on page 24
- "CPU Hang on Power Up (16822073)" on page 24
- "slb_lla: Long Time to Report Correct Status When the Link Is Down or Up (16424341)" on page 25
- "SSL V3.0 POODLE DISABLE SSL V3 (19842504)" on page 25
- "Re-configure IP address after a "no ip address", previous config re-appears (18794861)" on page 26

## Switch Might Get Stuck at `uboot` on SSD Related Error (16922931)

There is a very small chance when a switch is rebooted that it could hang while loading the kernel image early in the boot cycle. If the hang happens, you see a register dump appear on the console.

**Workaround:** Reboot the switch. If rebooting does not correct the problem, initiate a service call.

## Loss of Access to Management Node Oracle ILOM When Starting or Resetting the System (16893765)

When using the sideband feature on the Oracle ILOM X4170-M2/ZFSSA-controller to connect to the management network through the Oracle Switch ES1-24, the port might not link up after the host is shut down. This issue results in loss of access to the node.

**Workaround:** Explicitly set the speed to 100 Mbps on the switch port where the X4170-M2/ZFSSA-controller is connected. For example, if the port is being used in `ex 0/2`, run these commands to set the speed to 100 Mbps.

```
SEFOS# config terminal
SEFOS(config)# interface extreme-ethernet 0/2
SEFOS(config-if)# shutdown
SEFOS(config-if)# speed 100
SEFOS(config-if)# no shutdown
SEFOS(config-if)# end
SEFOS# write startup-config
```

## CPU Hang on Power Up (16822073)

During a power cycle, it is possible that the CPU might not power-on. If this rare case occurs, all front panel LEDs remain off and nothing is displayed on console output.

**Workaround:** Power cycle the system again. If the problem reoccurs, initiate a service call.

## `slb_lla`: Long Time to Report Correct Status When the Link Is Down or Up (16424341)

When links configured as part of an SLB group are shut down or brought back up on both SLB active and SLB standby switches, the SLB status on an SLB standby switch does not get updated until the ARP timeout happens.

**Workaround:** There is no workaround. Check for the availability of a patch for this issue. You must wait for the default ARP timeout to happen before the SLB status gets updated.

## SSL V3.0 POODLE DISABLE SSL V3 (19842504)

**Workaround:** Disable `SSLv3` from ILOM under `/SP/service/https`.

```
-> cd /SP/services/https
/SP/services/https

-> set sslv3=disabled
Set 'sslv3' to 'disabled'

-> show
/SP/services/https
   Targets:
       ssl

   Properties:
       port = 443
       servicestate = enabled
       sslv2 = disabled
       sslv3 = disabled
       tlsv1 = enabled
       weak_ciphers = disabled

   Commands:
       cd
       set
       show
```

# Re-configure IP address after a "no ip address", previous config re-appears (18794861)

When multiple secondary addresses are configured on a VLAN interface, deleting them with a single "no ip address" command or by deleteing them one at a time does not delete them internally. Later on if a new secondary address needs to be added, an error is thrown "`% Maximum secondary addresses allowed on interface exceeded`".

**Workaround:**

1. Delete only one secondary address, and add the new address right after deleting.

or

2. Delete the L3 interface vlan and re-configure all ip addresses again. For example, if it is vlan 100, do the following to delete the vlan.

```
conf term
no int vlan 100
end
```